CASE REPORT

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Temporal lobe epilepsy: A rare post chicken pox neurological sequel

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ABSTRACT

Chicken pox caused by the varicella zoster virus is generally a benign, self-limited disease; very rarely presents with neurological complications especially in immunocompetent individuals. Here we report 19 year old girl with focal seizure in right lower limb and twitching of right angle of mouth with visual hallucination in the form of bizarre ghost moving around her after 10 days of chicken pox infection. Her electroencephalography was suggestive of temporal lobe epilepsy.

Keywords: Chicken pox, Neurological sequelae, Complications, temporal lobe epilepsy

1. INTRODUCTION

Chickenpox is a common and benign disease of childhood and the infection in adults is uncommon. Morbidity and mortality increases, if it involves the adult especially in immunocompromised state. The neurological complications following the chicken pox infection are rare (0.01%- 0.03%) and includes encephalitis, acute disseminated encephalomyelitis, acute cerebellar ataxia, facial nerve palsy, optic neuritis, transverse myelitis, etc, (Balamurugesan et al., 2018). Since the post-infectious temporal lobe seizure is very rare in adults, here we report 19 year old girl presented to the medicine department with focal seizure in right lower limb and twitching of right angle of mouth with visual hallucination in the form of bizarre ghost moving around her after 10 days of chicken pox infection.

2. CASE REPORT

A 19 year-old young and healthy girl presented with complaints of abnormal movement of right lower limb, twitching of right angle of mouth. She also gave history of visual hallucination in the form of bizzare ghost moving around, as well as some close relative calling her who was already dead. There was no history of high grade fever, altered sensorium or unconsciousness. Two weeks back she had infection with chicken pox having eruptions over the body (mainly present over the face, neck, chest, back and abdomen). There was no history of exposure to chickenpox during childhood. Her past history for irrelevant. On examination, she was afebrile, alert but apprehensive due to abnormal movement and visual hallucination. She had crusted vesicles still present on face suggestive of chicken pox (figure 1), also present over the trunk and extremities. Rashes were absent in palms and soles. Her cervical and axillary lymph nodes were not enlarged. Pulmonary, cardiovascular and abdominal examinations were normal. On neurological examination apart from abnormal movement of right lower limb and twitching of right angle of mouth, all were unremarkable.

Her routine laboratory examination revealed haemoglobin 10.6 g/dL, total leucocyte count 8800/cmm (with granulocytes 66%), platelet count 1,70,000 and haematocrit 32.2%. Routine biochemistry, renal profile, and chestx-ray were normal. Serologyfor Human Immunodeficiency Virus, Hepatitis B, and Hepatitis C were negative. Patient was treated outside our hospital with valacyclovir 1000mg thrice a day for one week. In view of focal seizure her electroencephalography was planned which was suggestive of delta waves being present at the area involving the temporal lobe part of the brain ([figure 2). Her MRI brain was normal (Fig 3). Patient was diagnosed as post chicken pox temporal lobe epilepsy and put on levetiracetam 500mg twice a day. She responded very well within 5 days of admission, her focal seizure and hallucination disappeared. Her EEG becomes normal. She was discharged on antiepileptic drugs and doing well on follow up after three month.

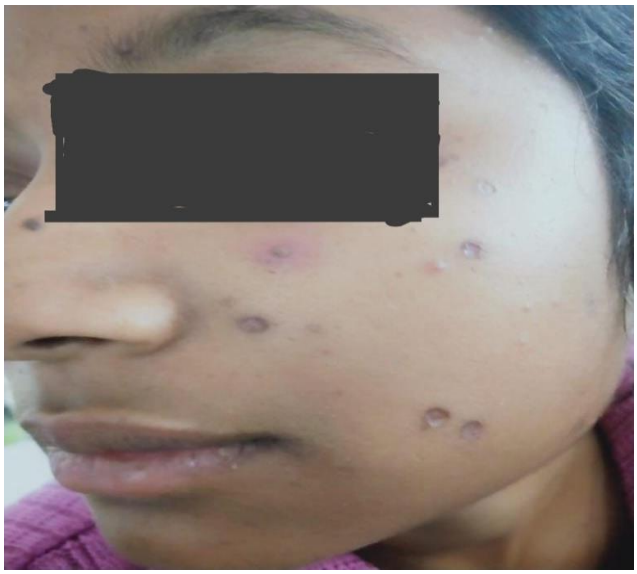

Figure 1 post chicken crust on the face.

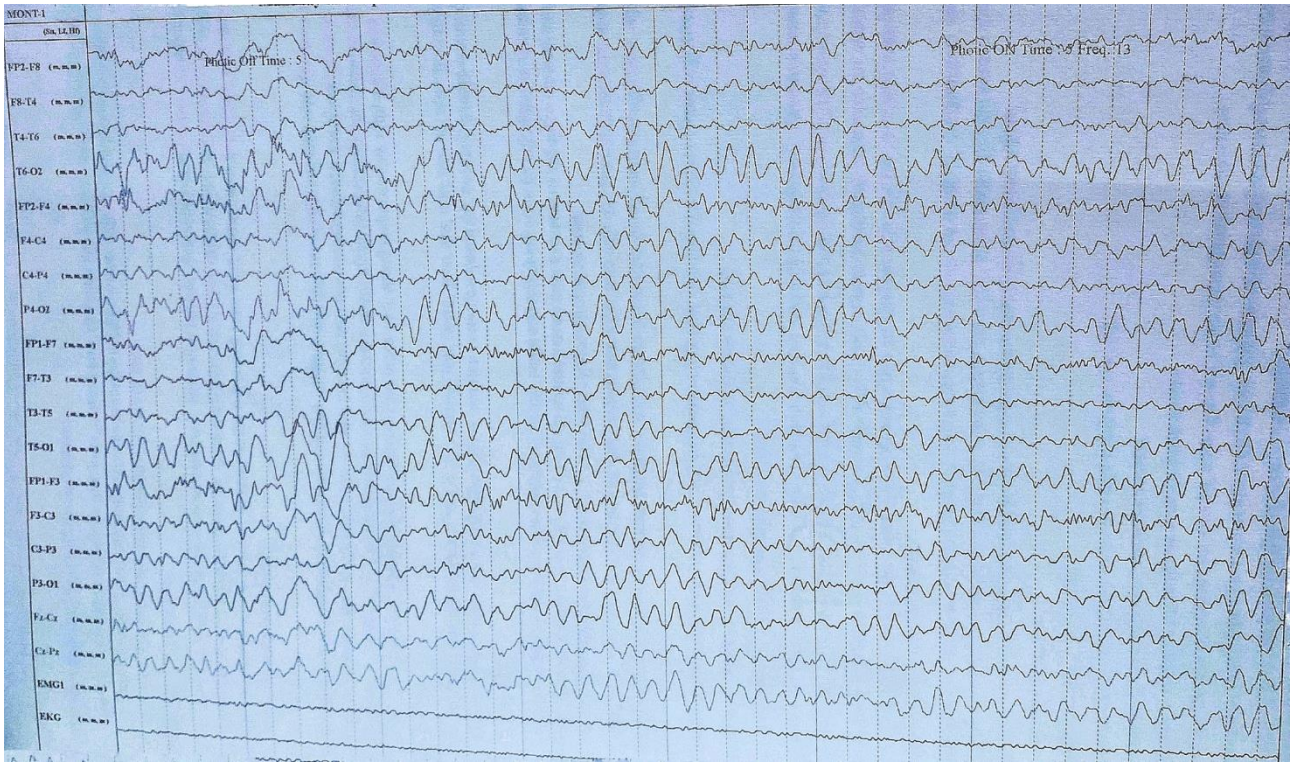

Figure 2 EEG showing delta waves involving the temporal lobe part of the brain.

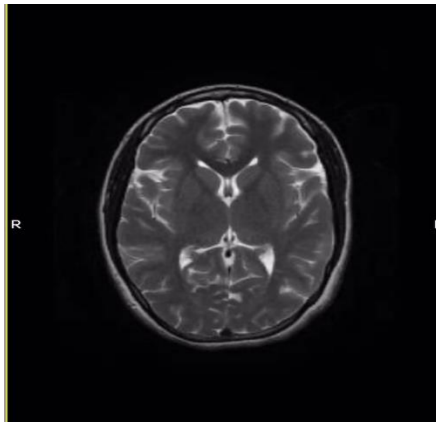

Figure 3 MRI brain plain of the patient which was normal

3. DISCUSSION

Chicken pox caused by varicella zoster virus is typically a benign but highly contagious, self limiting disease common in adolescence. In tropical areas seasonality of the infection are less clearly described as they are found commonly among adults (Amalnath et al., 2016). Possible hypothesis may be lack of exposure to varicella zoster virus during childhood due to rural living conditions in the tropics where the virus circulates poorly and high temperature inactivates the virus in skin lesions, thence reducing its transmission. The risk of complication is highest in people with compromised immune status and in adults and old age (Grahan et al., 2015).

Varicella pneumonia, pancreatitis is common complication in adults and can happen in immunocompetent as well (16-25%) (Kumar et al., 2007). Among neurological complication, encephalitis can occur in 0.1-0.2% of adults, with mortality rate between 5-20%. Others may be meningitis, transverse myelitis and cerebellar ataxia (Grahan et al., 2015). The complications presented in our patient were temporal lobe epilepsy which happened post infectious and not reported yet in various literature.

Studies had been reported in the form of movement disorder like myoclonus, hemichorea, disturbance of consciousness, focal seizures, oculomotor nerve palsy, multiple cranial nerves involvement (VII, IX, X, and XII) and/or neuropsychiatric symptoms (confusion, disorientation, cognitive disorder, behavioural disorder, psychomotor deceleration, hallucination) (Grahan et al., 2015; Paul et al., 2010).

4. CONCLUSION

Temporal lobe epilepsy is not a common complication of chicken pox, more over in otherwise healthy patients. This interesting case increase awareness about this and so prevents the morbidity by starting early treatment.

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Conflicts of Interest: The authors declare no conflict of interest.

Informed consent: Written & Oral informed consent was obtained from participant included in the study. Additional informed consent was obtained from participant for whom identifying information is included in this manuscript.

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